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NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
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NEWS 6	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 7	Sep 03	JAPIO has been reloaded and enhanced
NEWS 8	Sep 16	Experimental properties added to the REGISTRY file
NEWS 9	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 10	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11	Oct 24	BEILSTEIN adds new search fields
NEWS 12	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 13	Nov 18	DKILIT has been renamed APOLLIT
NEWS 14	Nov 25	More calculated properties added to REGISTRY
NEWS 15	Dec 04	CSA files on STN
NEWS 16	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17	Dec 17	TOXCENTER enhanced with additional content
NEWS 18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 20	Feb 13	CANCERLIT is no longer being updated
NEWS 21	Feb 24	METADEX enhancements
NEWS 22	Feb 24	PCTGEN now available on STN
NEWS 23	Feb 24	TEMA now available on STN
NEWS 24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 25	Feb 26	PCTFULL now contains images
NEWS 26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 27	Mar 20	EVENTLINE will be removed from STN
NEWS 28	Mar 24	PATDPAFULL now available on STN
NEWS 29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 30	Apr 11	Display formats in DGENE enhanced
NEWS 31	Apr 14	MEDLINE Reload
NEWS 32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 33	Apr 21	Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35	Apr 28	RDISCLOSURE now available on STN
NEWS 36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39	May 16	CHEMREACT will be removed from STN
NEWS 40	May 19	Simultaneous left and right truncation added to WSCA
NEWS 41	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation

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 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
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=> file ca, biosis, medline
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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE 'MEDLINE' ENTERED AT 10:45:59 ON 22 MAY 2003

=> s dna polymerase?
L1        61390 DNA POLYMERASE?

=> s poly u sepharose ?
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ADDITIONAL CHARACTERS REQUIRED AFTER '?' FOR LEFT TRUNCATION
ADDITIONAL CHARACTERS REQUIRED AFTER '?' FOR LEFT TRUNCATION
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the truncation symbol and you are searching in a field that uses
implied proximity, the system may interpret the truncation symbol as
being at the beginning of a term.  Implied proximity is used in search
fields indexed as single words, for example, the Basic Index.  To see
which fields in the current file have left truncation, enter "HELP
SFIELDS" at an arrow prompt (=>).

=> s poly u sepharose?
L2          695 POLY U SEPHAROSE?

=> s l1 amd l2
MISSING OPERATOR L1 AMD
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l1 and l2
L3           22 L1 AND L2
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=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            15 DUP REM L3 (7 DUPLICATES REMOVED)

=> d 1-15 ab,bib

L4   ANSWER 1 OF 15  CA  COPYRIGHT 2003 ACS
AB   The present invention provides methods and kits for obtaining
     substantially pure DNA polymerases. The methods
     comprise fractionating prepns. comprising at least one DNA
     polymerase using Poly U Sepharose
     chromatog. and obtaining substantially pure DNA
     polymerase. The present invention also provides compns.
     comprising substantially pure archaebacterial DNA
     polymerase obtained by fractionation using Poly
     U Sepharose chromatog. resin.
AN   134:218921  CA
TI   Methods for purifying DNA polymerases using
     Poly U Sepharose chromatog.
IN   Allen, Ronda M.; McMullan, Daniel T.; Mullinax, Rebecca L.
PA   Stratagene, USA
SO   PCT Int. Appl., 37 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   WO 2001016333      A1    20010308      WO 2000-US23653  20000829
         W:  AU, CA, JP
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     EP 1212432         A1    20020612      EP 2000-957889   20000829
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY
PRAI US 1999-151805P    P     19990831
     US 2000-648641     A     20000825
     WO 2000-US23653    W     20000829
RE.CNT  5      THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 2 OF 15      MEDLINE
AB   1. The replicase gene of foot-and-mouth disease virus (FMDV) was
     expressed in Escherichia coli under the control of a tac promoter. The
     recombinant enzyme was purified by inclusion body precipitation, elution,
     and poly(U) Sepharose chromatography. 2.
     The enzyme exhibits poly(A)-dependent oligo(U)-primed poly(U) polymerase
     activity. The specific activity of the purified replicase is 1.3 x 10(5).
     The recombinant replicase synthesizes RNA using FMDV RNA as template, as
     well as heterologous RNAs, such as globin RNA and synthetic RNAs,
     polyadenylated or not. In all polymerization reactions, RNA products
     twice the size of the template are formed, both in the presence and
     absence of an oligo(U) primer. The enzyme is also capable of
     incorporating [alpha 32P]UTP in all RNAs tested except the viral template.
     This activity does not seem to be related to the primer independent
     polymerization activity. 3. The products from polymerization reactions
     were characterized by hybridization. In the absence of primer they
     consist of the template and a complementary strand covalently attached,
     while in the presence of primer they consist of two complementary strands
     synthesized de novo. 4. We propose mechanisms of RNA synthesis by the
     recombinant FMDV replicase in the absence and presence of primer. These
     mechanisms are discussed in terms of models for in vitro RNA synthesis of
     other picornaviruses.
AN   94108402      MEDLINE
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DN 94108402 PubMed ID: 1342607
TI In vitro activities of a recombinant foot-and-mouth disease virus replicase expressed in Escherichia coli.
AU Pacheco A B; Brindeiro R M; Soares M A; de-Almeida D F; Tanuri A
CS Laboratorio de Fisiologia Celular, Instituto de Biofisica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Brasil.
SO BRAZILIAN JOURNAL OF MEDICAL AND BIOLOGICAL RESEARCH, (1992) 25 (8) 761-76.
Journal code: 8112917. ISSN: 0100-879X.
CY Brazil
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199402
ED Entered STN: 19940228
Last Updated on STN: 19980206
Entered Medline: 19940216

L4 ANSWER 3 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 1
AB Two DNA-dependent **DNA polymerases** (**DNA polymerase** I which is not adsorbed on a DEAE-cellulose column, and **DNA-polymerase** II, which is absorbed on this column and is eluted from it with 0.3 M NaCl), were isolated from A. laidlawii PG-8. **DNA polymerase** I in a homogeneous state was obtained as a result of stepwise treatment on heparin-Sepharose (elution with 0.35M NaCl) and **poly(U)-Sepharose** (elution with 0.3M NaCl). It shown by electrophoresis to be a single polypeptide with mol. wt. of 72,000. **DNA polymerase** II was also obtained in a homogeneous state as a result of sequential treatment on heparin-Sepharose (elution with 0.3M NaCl) and on poly(A)-Sepharose (elution with 0.25M NaCl); it exhibited a mol. wt. of 45,000.
AN 116:230576 CA
TI Chromatographic properties of DNA-dependent **DNA** - **polymerases** from Acholeplasma laidlawii PG-8
AU Bezuglyi, S. V.; Skripal, I. G.; Babichev, V. V.
CS Inst. Microbiol. Virol., Kiev, USSR
SO Mikrobiologicheskii Zhurnal (1978-1993) (1992), 54(1), 51-7
CODEN: MZHUDX; ISSN: 0201-8462
DT Journal
LA Russian

L4 ANSWER 4 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 2
AB The purifn. of **DNA polymerases** (RNA-directed **DNA polymerases** and DNA-directed **DNA polymerases**) from a breast tumor cell line (T-47D) on **poly (U)-Sepharose** 4B is reported. The elution of these enzymes was followed in each fraction by activity measurements with the four primer-templates poly(rA)-oligo(dT)12-18, poly(dA) oligo(dT)12-18, poly(rC)-oligo(dG)12-18 and poly(rCm)-oligo(dG)12-18. The control of the polymerase purifn. by chromatog. was performed by SDS-PAGE of the pooled active enzymic fractions.
AN 114:138574 CA
TI Purification on poly(I)-Sepharose 4B of human breast cancer cell line T-47D **DNA polymerases**
AU Bernard, D.; Moyret, C.; Maurizis, J. C.
CS Lab. Oncol. Mol., Cent. Jean Perrin, Clermont-Ferrand, 63011, Fr.
SO Journal of Chromatography (1991), 539(2), 511-16
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English

L4 ANSWER 5 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 3
AB Reverse transcriptase (RT) transcribes viral RNA into DNA to be integrated into the host genome. To study epidemiol. aspects of human leukemias and

lymphomas which are known to express retroviruses, clin. specimens were assayed for divalent cation-dependent viral-specific RT. The assay was carried out with cells solubilized with a detergent to release RT enzyme. RT was purified with **poly(U)-Sepharose**, which fixed all **DNA polymerases**, and assayed with 4 synthetic homopolymers, oligonucleotide primed-templates, poly(rA)-oligo(dT)12-18 or poly(dA)-oligo(dT)12-18 with Mg2+, poly(rC)-oligo(dG)12-18 or poly(rCm)-oligo(dG)12-18 with Mn2+ as divalent cation and [methyl-3H]thymidine 5'-triphosphate or deoxy[8-3H]guanosine 5-triphosphate. Radioactivity incorporation of the ppt. allowed quantitation of Rt activity. One Hodgkin's disease, 1 out of 2 B lymphomas, 1 out of 2 T lymphomas, and 8 out of 12 leukemias were pos. for RT activity as well as acquired immunodeficiency syndrome (AIDS) patients, known to express RT. The obtained RT activity in hematol. malignancies was comparable to pos. controls such as RT enzymes purified from avian myeloblastosis and Moloney murine leukemia viruses.

AN 114:79422 CA
TI Presence of reverse transcriptase in human leukemias and lymphomas
AU Moyret, Caroline F.; Bernard, Dominique J.; Maurizis, Jean Claude; Chassagne, Jacques; Plagne, Robert; Chollet, Philippe
CS Lab. Oncol. Mol., Cent. Jean Perrin, Clermont-Ferrand, 63011, Fr.
SO Clinica Chimica Acta (1990), 191(1-2), 61-6
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English

L4 ANSWER 6 OF 15 MEDLINE
AB The function of reverse transcriptase (RT) in retroviruses is to copy their RNA genomes in DNA to be integrated into the host genome. We report a high purity preparation of this enzyme by adsorption onto **poly (U)-sepharose**. We analyzed RT activity with poly(rA)--oligo (dT)12-18, poly(dA)--oligo (dT)12-18, poly(rC)--oligo (dG)12-18 and poly(rCm)--oligo (dG)12-18 to obtain a more accurate pattern of RT. 8 out of 16 malignant breast samples were positive for RT activity, more specifically with poly(rC)--oligo (dG)12-18 and poly(rCm)--oligo (dG)12-18. The 5 non-malignant mammary samples tested were negative for RT activity. Assays with poly(rC)--oligo (dG)12-18 and poly(rCm)--oligo (dG)12-18. The 5 non- malignant mammary samples tested were negative for RT activity. Assays with N--nitroso--N--methylurea--induced rat mammary carcinomas were negative for RT activity.

AN 89117072 MEDLINE
DN 89117072 PubMed ID: 2464335
TI Detection of reverse transcriptase activity in human breast tumors.
AU Moyret C F; Bernard D J; Maurizis J C; Chollet P; Plagne R
CS Laboratoire d' Immunologie et de Cancerologie, Centre Jean Perrin, Clermont-Ferrand, France.
SO ANTICANCER RESEARCH, (1988 Nov-Dec) 8 (6) 1279-83.
Journal code: 8102988. ISSN: 0250-7005.
CY Greece
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198903
ED Entered STN: 19900308
Last Updated on STN: 19960129
Entered Medline: 19890306

L4 ANSWER 7 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 4
AB A recombinant plasmid contg. a DNA segment complementary to the mRNA for mouse submandibular gland renin [9015-94-5] has been constructed and cloned. Renin mRNA was enriched by **poly(U)-Sepharose** chromatog. and sucrose d. gradient centrifugation. Double-stranded cDNA, prepd. from this enriched mRNA with reverse transcriptase and **DNA polymerase** I, was inserted into

the PstI site of pBR322 by the dC-dG tailing technique. Recombinant plasmids contg. this cDNA were amplified in Escherichia coli .chi.1776. One clone contg. a 700-base-pair insert complementary to renin mRNA was isolated by pos. selection. Southern blot hybridization of genomic DNA following restriction enzyme digestion and gel electrophoresis demonstrated that the mouse renin cDNA cross-hybridizes with renin genes of various mammals including humans.

AN 98:28910 CA
TI Molecular cloning of DNA complementary to mouse submandibular gland renin mRNA
AU Masuda, Tsutomu; Imai, Takashi; Fukushi, Takao; Sudoh, Masayuki; Hirose, Shigehisa; Murakami, Kazuo
CS Inst. Appl. Biochem., Univ. Tsukuba, Ibaraki, 305, Japan
SO Biomedical Research (1982), 3(5), 541-5
CODEN: BRESD5; ISSN: 0388-6107
DT Journal
LA English

L4 ANSWER 8 OF 15 MEDLINE
AB Cytochrome P-450 mRNA has been partially purified from membrane-bound polysomes of the livers of phenobarbital-treated rats by SDS-phenol-chloroform extraction, followed by **poly(U)-Sepharose** chromatography and by centrifugation through a sucrose density gradient. Cytochrome P-450 mRNA activity was detected near 18S in the sucrose density gradient, accounting for approximately 5% of total mRNA activity on the basis of [3H]leucine incorporation in an in vitro translation system of wheat germ. Complementary DNA (cDNA) which had been synthesized on the partially purified mRNA by AMV reverse transcriptase was inserted into the Pst I site of pBR 322. After bacterial transformation, and in situ colony hybridization using [32P]cDNA as a probe, a colony carrying cytochrome P-50 cDNA sequence was identified by a hybridization-arrested translation assay. Sequence complementarity of the inserted DNA sequence to cytochrome P-450 mRNA was further confirmed by a positive hybridization-translation assay. The mRNA isolated from the partially purified mRNA preparation by hybridizing it with the recombinant DNA (III-8-10) showed enriched synthesis of a protein product whose apparent molecular weight was consistent with that of cytochrome P-450, and which was immunoprecipitable with anti-cytochrome P-450 antibody.

AN 82030655 MEDLINE
DN 82030655 PubMed ID: 6169709
TI Construction and identification of a hybrid plasmid containing DNA sequence complementary to phenobarbital-inducible cytochrome P-450 messenger RNA from rat liver.
AU Fujii-Kuriyama Y; Taniguchi T; Mizukami Y; Sakai M; Tashiro Y; Muramatsu M
SO JOURNAL OF BIOCHEMISTRY, (1981 Jun) 89 (6) 1869-79.
Journal code: 0376600. ISSN: 0021-924X.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198112
ED Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19811215

L4 ANSWER 9 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB SSV [simian sarcoma virus] reverse transcriptase (RT) was purified to homogeneity and used in a radioimmunoassay (RIA). Following iodination, the homogeneity of the protein and its identity with RT were confirmed by several criteria: its MW on an SDS[sodium dodecyl sulfate]-polyacrylamide gel; its precipitation by anti-SSV RT but not by antisera to other SSV proteins; its cross-reactivity in RIA with antisera to other retroviral polymerases; its competition in RIA by active homogeneous SSV RT but not by other purified SSV proteins; and its competition in RIA by only those

fractions from a **poly(U)-Sepharose** column possessing SSV RT activity. Competition of the labeled probe with disrupted retroviruses of the infectious primate group showed that, while a homologous RIA detected only type-specific enzyme determinants, it did not distinguish the various woolly-gibbon retroviral **DNA polymerases**. A more broadly reactive heterologous assay utilizing an antiserum to R-MuLV [Rauscher murine leukemia virus] RT detected group- but not interspecies-specific enzyme determinants. Highly purified RT is not essential for reliable results in enzyme neutralization or enzyme binding assays. The greater sensitivity of enzyme binding compared to enzyme neutralization assays is a function of the antibody, not of the antigen. Competition RIA using extracts of virus-infected cells showed that infectious primate retrovirus RT could be measured in a crude system and that cellular **DNA polymerases** .alpha.,.beta. and .gamma. did not compete with the labeled probe. [These procedures are discussed in light of findings of retrovirus-like RT in people with malignancies.]

AN 1980:286954 BIOSIS
DN BA70:79450
TI RADIO IMMUNOASSAY FOR INFECTIOUS PRIMATE RETROVIRUS REVERSE TRANSCRIPTASE CHARACTERIZATION COMPARISON WITH CONVENTIONAL IMMUNOLOGIC ASSAYS AND APPLICABILITY TO CELLULAR EXTRACTS.
AU ROBERT-GUROFF M; KALYANARAMAN V S; SARNGADHARAN M G
CS LAB. TUMOR CELL BIOL., NATL. CANCER INST., BETHESDA, MD. 20205, USA.
SO INT J CANCER, (1980) 25 (6), 749-756.
CODEN: IJCNAW. ISSN: 0020-7136.
FS BA; OLD
LA English

L4 ANSWER 10 OF 15 CA COPYRIGHT 2003 ACS
AB Partial chymotryptic digestion of purified avian myeloblastosis virus .alpha..beta. **DNA polymerase** resulted in the activation of a Mg2+-dependent DNA endonuclease activity. Incubation of the polymerase-protease mixt. in the presence of supercoiled DNA and Mg2+ permitted detection of the cleaved polymerase fragment possessing DNA nicking activity. Protease digestion conditions were established which permitted selective cleavage of .beta. to .alpha. (which contained **DNA polymerase** and RNase H activity) and to a family of polypeptides ranging in size from 30,000 to 34,000 daltons. These latter .beta.-unique fragments were purified by **poly(U)-Sepharose** 4B chromatog. and were shown to contain both DNA-binding and DNA endonuclease activities. This group of polymerase fragments derived by chymotryptic digestion of .alpha..beta. **DNA polymerase** is similar to the in-vivo-isolated avian myeloblastosis virus p32pol in size, sequence, and DNA endonuclease activity.
AN 92:106412 CA
TI Activation of an magnesium(2+)-dependent DNA endonuclease of avian myeloblastosis virus .alpha..beta. **DNA polymerase** by in vitro proteolytic cleavage
AU Grandgenett, Duane P.; Golomb, Miriam; Vora, Ajaykumar C.
CS St. Louis Univ. Med. Cent., Inst. Mol. Virol., St. Louis, MO, 63110, USA
SO Journal of Virology (1980), 33(1), 264-71
CODEN: JOVIAM; ISSN: 0022-538X
DT Journal
LA English

L4 ANSWER 11 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB The poly(A)-mRNA fraction isolated by chloroform deproteinization of liver polysomes and **poly(U)-sepharose** chromatography contains a low MW (.simeq. 1000) peptidic fraction. The peptides (deprimerones) were extracted with 80% ethanol at pH 9.5; were purified on sephadex G-25 column as a fraction of MW between 1600-600, yielding .apprx. 9 mg/mg mRNA. If deproteinization is performed with phenol-chloroform, the yield is .apprx. 2 mg/mg mRNA. In Novikoff hepatoma

the yield of the same preparation is only 2.7 mg/mg mRNA (.apprx. 70% decrease). The obtained deprimerones inhibit transcription of thymus DNA with Eschirichia coli RNA polymerase and [3H]-GTP by .apprx. 90% at a ratio peptide/DNA = 2. For comparison the deprimerones obtained previously by extraction of deproteinized DNA inhibit transcription only by .apprx. 50% at the same peptide/DNA ratio. The poly(A)-mRNA deprimerone level decreased during carcinogenesis and the specific occurrence of deprimerones with poly(A)-mRNA was supported. The results remain in accordance with and provide further support for the deprimerone theory of carcinogenesis.

AN 1981:141266 BIOSIS
DN BA71:11258
TI POLY ADENYLIC-ACID MESSENGER RNA DEPRIMERONES IN RAT LIVER AND NOVIKOFF HEPATOMA CELLS.
AU HILIAR M; PRZYJEMSKI J; STOLZMANN Z
CS DEP. BIOL., TEX. SOUTH. UNIV., HOUSTON, TEX. 77004, USA.
SO MOL BIOL REP, (1980) 6 (2), 89-94.
CODEN: MLBRBU. ISSN: 0301-4851.
FS BA; OLD
LA English

L4 ANSWER 12 OF 15 CA COPYRIGHT 2003 ACS
AB By use of a hybridization technique between DNA and RNA, a poly(A)-contg. mRNA hybridized with hepatitis B Dane particle DNA was detected in a polysome-rich fraction obtained from hepatitis virus-infected liver of hepatoma and liver cirrhosis patients. The polysome-rich fraction showed the activity of hepatitis B surface antigen in the reverse passive hemagglutination test. The mRNA was isolated by affinity chromatog. with **poly(U)-Sepharose** 4B from the RNA extd. from the polysomes. Radioactive DNA of the Dane particles was prepd. by the incubation of core particles with [3H]dATP and [3H]dGTP via the endogenous **DNA polymerase** reaction. DNA-RNA hybrids were sepd. by equil. CsCl d.-gradient centrifugation. The mRNA isolated from hepatitis virus-infected liver hybridized with 3H-labeled Dane particle DNA but RNA of uninfected liver did not hybridize. The buoyant d. of the DNA-mRNA hybrids was about 1.75 in CsCl.

AN 94:154350 CA
TI Messenger RNA hybridized with the DNA isolated from hepatitis B Dane particles
AU Yokota, Tomoyuki; Minami, Kazumori
CS Dep. Bacteriol., Fukushima Med. Coll., Fukushima, 960, Japan
SO Fukushima Journal of Medical Science (1979), 26(3-4), 111-19
CODEN: FJMSAU; ISSN: 0016-2590
DT Journal
LA English

L4 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Lysates of Moloney murine sarcoma-leukemia virus [M-MSV(MLV)], a virus complex grown in the rat cell line 78A-1, contained 3 RNase H species separable by [poly(C)]-agarose chromatography. RNase H activity (RNase H I) associated with RNA-directed **DNA polymerase** eluted at 0.23 M KCl from poly(C)-agarose. RNase H II, which eluted from poly(C)-agarose at 0.12 M KCl and was not associated with **DNA polymerase** activity, was identical to an RNase H species (designated RNase H II) previously isolated from M-MSV(MLV) by a different procedure. M-MSV(MLV) RNase H II was established to be a random exohybridase that requires free-chain termini in its hybrid substrate for activity. Lysates of Rickard feline leukemia virus also contained RNase H activity not associated with **DNA polymerase** activity that eluted from poly(C)-agarose at 0.12 M KCl. A 3rd species of enzyme from M-MSV(MLV) lysates, called RNase H III, did not bind to poly(C)-agarose in 0.06 M KCl. RNase H III was purified from lysates of M-MSV(MLV) and M-MLV (grown in mouse cells) by sequential chromatography on poly(C)-agarose, DEAE-cellulose, phosphocellulose and **poly**(

U)-**Sepharose**. Purified RNase H III was free of any associated **DNA polymerase** activity, had an apparent MW of 30,000 determined by Sephadex G-100 gel filtration, had an absolute requirement for Mn2+ (1 mM optimum) for the degradation of [3H](A)n.cntdot.(dT)n, was inhibited by the presence of any salt in reaction mixtures, and was endoribonucleolytic in its mode of action as indicated by the size distribution of limited degradation products of [3H](A)n.cntdot.(dT)n. RNase H III was inhibited by antisera prepared against Rauscher MLV and simian sarcoma virus reverse transcriptase, and the quantity of RNase H III and RNase H I present in lysates of M-MLV were reduced and increased proportionately if virus was lysed in the presence of the protease inhibitor phenylmethylsulfonyl fluoride. Apparently, RNase H III is a proteolytic cleavage product of **DNA polymerase**-RNase H. Substantial RNase H activity that did not bind to poly(C)-agarose in 0.06 M KCl was also found in lysates of Harvey MSV(MLV), Rauscher MLV and Rickard feline leukemia virus, but not in lysates of avian myeloblastosis virus.

AN 1978:249451 BIOSIS
DN BA66:61948
TI MULTIPLE RNASE H ACTIVITIES IN MAMMALIAN TYPE C RETROVIRUS LYSATES.
AU GERARD G F
CS INST. MOL. VIROL., ST. LOUIS UNIV. SCH. MED., ST. LOUIS, MO. 63110, USA.
SO J VIROL, (1978) 26 (1), 16-28.
CODEN: JOVIAM. ISSN: 0022-538X.
FS BA; OLD
LA English

L4 ANSWER 14 OF 15 CA COPYRIGHT 2003 ACS
AB Globin mRNA was isolated from human reticulocytes and used for the synthesis of complementary DNA (cDNA). From 1000-1500 mL of normal blood, 5-10 .mu.g of poly(A)-contg. 9 S mRNA was isolated by **poly(U)-Sepharose** chromatog. The template capacity of this poly(A)-contg. human globin RNA for reverse transcription is 2 .times. 104 pmol cDNA/absorbance at 260 nm with RNA-dependent **DNA polymerase** from avian myeloblastosis virus. Most of the cDNA has a mobility of 9 S, indicating they are full length copies of mRNA.

AN 88:70602 CA
TI Isolation of human globin mRNA and synthesis of complementary DNA
AU Limborskaya, S. A.; Frolova, L. Yu.
CS Lab. Biophys., Inst. Med. Genet., Moscow, USSR
SO Acta Biologica et Medica Germanica (1977), 36(3-4), 335-9
CODEN: ABMGAJ; ISSN: 0001-5318
DT Journal
LA English

L4 ANSWER 15 OF 15 MEDLINE
AB Following a 5 min pulse of [5- 3H]orotic acid via the protal vein, the specific radioactivity of non-poly(A)heterogeneous nuclear RNA (HnRNA) reaches a peak at 12 h after partial hepatectomy. In contrast, poly(A)-HnRNA was maximally elevated only at 2 h after operation. After intraportal injection of cordycepin (3'-deoxyadenosine) 1 min before [5-3H]orotic acid, a dose-dependent inhibition of nuclear HnRNA and rRNA occurred. Fractionation of HnRNA on **poly(U)-Sepharose** following 20 mg/kg of cordycepin revealed that a 65% reduction occurred in the labeling of poly(A)-HnRNA while non-polyactivity of UTP in control and cordycepin-treated animals indicated no significant alterations in these parameters. Assessment of poly(A) size using poly(A)-HnRNA annealed with oligo(dT)10 as template primer for Escherichia coli **DNA polymerase** I, showed that 20 mg/kg of cordycepin inhibited nuclear polyadenylylation by 43%; no alteration in the binding of poly(A)-HnRNA to Millipore filters occurred at this dose of cordycepin. These results indicate that cordycepin is a non-selective inhibitor of nuclear RNA and poly(A)synthesis in regenerating rat liver.

AN 76114852 MEDLINE

DN 76114852 PubMed ID: 1082347
TI The action of cordycepin on nascent nuclear RNA and poly(A) synthesis in regenerating liver.
AU Glazer R I
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1976 Jan 19) 418 (2) 160-6.
Journal code: 0217513. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197604
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19760419

L4 ANSWER 4 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 2

AB The purifn. of **DNA polymerases** (RNA-directed **DNA polymerases** and DNA-directed **DNA polymerases**) from a breast tumor cell line (T-47D) on **poly (U)-Sepharose** 4B is reported. The elution of these enzymes was followed in each fraction by activity measurements with the four primer-templates poly(rA)-oligo(dT)12-18, poly(dA) oligo(dT)12-18, poly(rC)-oligo(dG)12-18 and poly(rCm)-oligo(dG)12-18. The control of the polymerase purifn. by chromatog. was performed by SDS-PAGE of the pooled active enzymic fractions.

AN 114:138574 CA

TI Purification on poly(I)-Sepharose 4B of human breast cancer cell line T-47D **DNA polymerases**

AU Bernard, D.; Moyret, C.; Maurizis, J. C.

CS Lab. Oncol. Mol., Cent. Jean Perrin, Clermont-Ferrand, 63011, Fr.

SO Journal of Chromatography (1991), 539(2), 511-16
CODEN: JOCRAM; ISSN: 0021-9673

DT Journal

LA English

L4 ANSWER 10 OF 15 CA COPYRIGHT 2003 ACS

AB Partial chymotryptic digestion of purified avian myeloblastosis virus .alpha..beta. **DNA polymerase** resulted in the activation of a Mg2+-dependent DNA endonuclease activity. Incubation of the polymerase-protease mixt. in the presence of supercoiled DNA and Mg2+ permitted detection of the cleaved polymerase fragment possessing DNA nicking activity. Protease digestion conditions were established which permitted selective cleavage of .beta. to .alpha. (which contained **DNA polymerase** and RNase H activity) and to a family of polypeptides ranging in size from 30,000 to 34,000 daltons. These latter .beta.-unique fragments were purified by **poly(U)-Sepharose** 4B chromatog. and were shown to contain both DNA-binding and DNA endonuclease activities. This group of polymerase fragments derived by chymotryptic digestion of .alpha..beta. **DNA polymerase** is similar to the in-vivo-isolated avian myeloblastosis virus p32pol in size, sequence, and DNA endonuclease activity.

AN 92:106412 CA

TI Activation of an magnesium(2+)-dependent DNA endonuclease of avian myeloblastosis virus .alpha..beta. **DNA polymerase** by in vitro proteolytic cleavage

AU Grandgenett, Duane P.; Golomb, Miriam; Vora, Ajaykumar C.

CS St. Louis Univ. Med. Cent., Inst. Mol. Virol., St. Louis, MO, 63110, USA

SO Journal of Virology (1980), 33(1), 264-71
CODEN: JOVIAM; ISSN: 0022-538X

DT Journal

LA English

L4 ANSWER 3 OF 15 CA COPYRIGHT 2003 ACS DUPLICATE 1

AB Two DNA-dependent **DNA polymerases** (**DNA polymerase** I which is not adsorbed on a DEAE-cellulose column, and **DNA-polymerase** II, which is absorbed on this column and is eluted from it with 0.3 M NaCl), were isolated from A. laidlawii PG-8. **DNA polymerase** I in a homogeneous state was obtained as a result of stepwise treatment on heparin-Sepharose (elution with 0.35M NaCl) and **poly(U)-Sepharose** (elution with 0.3M NaCl). It shown by electrophoresis to be a single polypeptide with mol. wt. of 72,000. **DNA polymerase** II was also obtained in a homogeneous state as a result of sequential treatment on heparin-Sepharose (elution with 0.3M NaCl) and on poly(A)-Sepharose (elution with 0.25M NaCl); it exhibited a mol. wt. of 45,000.

AN 116:230576 CA

TI Chromatographic properties of DNA-dependent **DNA** - **polymerases** from Acholeplasma laidlawii PG-8

AU Bezuglyi, S. V.; Skripal, I. G.; Babichev, V. V.

CS Inst. Microbiol. Virol., Kiev, USSR

SO Mikrobiologicheskii Zhurnal (1978-1993) (1992), 54(1), 51-7
CODEN: MZHUDX; ISSN: 0201-8462

DT Journal

LA Russian